Appl. No. 10/699,591
Response to Office Action
Dated August 24, 2005

REMARKS / DISCUSSION OF ISSUES

Claims 1-22 are pending in the claims. As no amendments have been made to the pending claims, Applicant directs the Examiner to the originally filed claims.

Allowable Subject Matter

Applicant gratefully acknowledges the indication of allowability of claims 14-22, provided that a rejection under 35 U.S.C. § 101 be overcome. For at least the reasons set forth below, it is respectfully submitted that these claims are patentable in present form.

Rejections under 35 U.S.C. § 101

Claims 14-22 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. For at least the reasons set forth below, it is respectfully submitted that these claims are patentable.

The Examiner proffers that claims 14-22 consist solely of mathematical operations without practical application in the technological arts or simply manipulates abstract ideas without practical application in the technological arts. Applicants respectfully, but strongly disagree.

It is well-established that unpatentable mathematical algorithms are identifiable by showing they are merely abstract ideas constituting disembodied concepts or truths that are not 'useful.' As such, to be patentable an algorithm must be applied in a 'useful' way.'

Claims 14-22 are drawn to a useful method. To wit, claim 14 is drawn to a method of setting a glass strain level. This setting occurs during glass fabrication and is useful in providing glass with a particular strain level. For example, and as noted in the filed application, in LCD displays, the display glass is normally required to have a strain level (in absolute magnitude) of 10 ppm or less. If the compaction of the glass is greater than approximately 10 ppm, misalignment and

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mis-registration of overlapping patterns in the LCD glass can result in image distortion. Accordingly, it is respectfully submitted that claim 14 and the claims that depend are drawn to a method including calculations that in-and-of themselves are applied in a useful way to set the glass strain.

In addition, the method of claims 14-22 are in no way abstract ideas constituting disembodied concepts or truths that are not 'useful.' To this end, the calculations of claims 14-22 include setting a set of initial fictive temperatures to an initial temperature value. The method of claim 14 includes calculating a value of viscosity at a current temperature and a current fictive temperature; calculating a change in the fictive temperature for a given change in time. If the current time equals a set final time, the method terminates. If not, certain steps in the method are repeated. In this manner the method enables a user to determine from material parameters and processing sequences of, for example, glass manufacturers whether a particular glass strain value may be realized. If not, the method allows the manufacturer to calculate changes in the process to meet the desired strain levels. As such, the method of claims 14-22 are clearly useful and are not abstract ideas constituting disembodied concepts or truths.

For at least the reasons set forth above, it is respectfully submitted that the rejection based on 35 USC § 101 is improper and should be withdrawn.

Rejections under 35 U.S.C. § 102(b)

Claims 1, 7 and 13 are rejected under 35 U.S.C. § 102(b) as being anticipated by DeBoyton, et al. (U.S. Patent 6,304,383). For at least the reasons set forth herein, it is respectfully submitted that this rejection is improper and should be withdrawn.

A proper rejection under 35 U.S.C. § 102(b) requires that all of the claimed elements be found in the applied art. If a single claimed element is not found in the applied art, a prima facie case of anticipation cannot be properly established. Claim 1 is drawn to a method of determining parameters of a plurality of thermal cycles to achieve a set glass strain level. The method includes:

providing a plurality of input parameters for a glass substrate and a

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plurality of parameters for a plurality of thermal cycles; and

providing a computer which is adapted to *iteratively modify at least one of the plurality of thermal cycle parameters so the glass strain is not greater than the set glass strain level after a final thermal cycle is completed.*

It is respectfully submitted that Deboyton, et al. lacks at least the disclosure of at least one of the features of claim 1. To this end, the reference to Deboyton, et al. is drawn to a temperature compensated optical filter and not to a method of determining parameters of a plurality of thermal cycles to achieve a **set glass strain level**. The optical apparatus 30 of Deboyton, et al. includes a holder 34; an optically transmissive substrate 40 and an interference filter 46 interposed between the substrate 40 and the holder 34. Temperature dependent thermal mismatch stresses are exerted on the filter 46. In embodiments disclosed in Deboyton, et al., there are compensating stresses provided by the substrate, and the holder and the adhesive. In short, the interference filter is compensated for temperature-induced changes by stresses created by its surrounding components. In yet another embodiment, electro-magneto-strictive materials are used for the interference filter materials. Interference properties of the filter can be altered by application of an electromagnetic field. The application of the field is via a controller 186, 286.

First, it is noted that the compensation for thermal stress in an interference filter is in no way the same as modifying thermal cycle parameters to maintain a certain glass strain level after completion of a final thermal cycle. Rather than setting a glass strain level in a glass material, the reference to Deboyton, et al. selects the strain in a substrate and a holder to compensate for thermal issues that can alter the optical interference properties of a filter. Moreover, the iterative process of the claims under examination is drawn to attaining a particular glass strain level, and not selecting materials to offset strain in a structure.

In addition, the controller of the reference to Deboyton, et al. controls an applied E/M field. There is no teaching nor suggestion of *iteratively modifying at least one of the plurality of thermal cycle parameters so the glass strain is not greater than the set glass strain level after a final thermal cycle is*

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completed. Finally, there is no final thermal cycle in the reference to Deboyton, et al.

For at least the reasons set forth above, it is respectfully submitted that the reference to Deboyton, et al. lacks at least the disclosure of at least one of the features of claim 1. As such, a prima facie case of anticipation of claim 1 cannot be established based on Deboyton, et al. Therefore, claim 1 and the claims that depend therefrom are allowable over the applied art. Allowance is earnestly solicited.

Rejections under 35 U.S.C. § 103(a)

1. Claims 2-6 are rejected under 35 U.S.C. § 103(a) as being obvious in view of Deboyton, et al. and Bocko (U.S. Patent 5,597,395).

2. Claims 8-12 are rejected under 35 U.S.C. § 103(a) as being obvious in view of Deboyton, et al.

As noted previously, claims 2-12, which depend from claim 1 immediately or ultimately, are patentable over the applied art at least because of their dependence on claim 1. Therefore, and while in no way conceding to the propriety of these rejections, claims 2-12 are also allowable over the applied art.

The above notwithstanding, Applicants respectfully traverse the rejection of claims 8-12 as being merely design choices of the artisan of ordinary skill. Applicant notes that the ranges of strain have applicability in many settings, such as the maximum compaction in LCD substrates. The attainment of these parameters is not a matter of design choice. Moreover, the Examiner has not provided evidence, extrinsic or from personal knowledge of the asserted routine nature of these claims. As such, the present rejection is traversed as lacking foundation. If the Examiner relies upon extrinsic evidence for support for this assertion, such evidence is respectfully requested. If, however, the assertion is from the personal knowledge of the Examiner, an affidavit under 37 C.F.R. 1.104(d) (2) is respectfully requested. Else, the rejection of claims 8-12 should be withdrawn.

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Conclusion

In view of the foregoing, applicant(s) respectfully request(s) that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and further replies to charge payment or credit any overpayment to Deposit Account Number 50-0238 for any additional fees, including, but not limited to, the fees under 37 C.F.R. §1.16 or under 37 C.F.R. §1.17.

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Respectfully Submitted

on behalf of:

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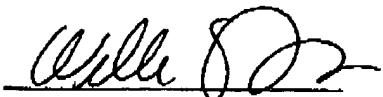
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(Reg. No. 38,456)

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